International Restless Legs Syndrome Study Group Rating Scale

Purpose Developed as a tool for assessing the severity Restless Legs Syndrome (RLS), the 10-item questionnaire asks respondents to use Likert-type ratings to indicate how acutely the disorder has affected them over the course of the past week. Questions can be divided into one of two categories: disorder symptoms (nature, intensity, and frequency) and their impact (sleep issues, disturbances in daily functioning, and resultant changes in mood).

Population for Testing The instrument has been validated with a sample of RLS patients aged 22–91.

Administration A self-report, pencil-and paper instrument, the scale requires approximately 5–10 min for completion.

Reliability and Validity A large psychometric study conducted by Walters and colleagues [1] found an internal consistency ranging from .93 to .95, an inter-rater reliability of .93 to .97, a test–retest reliability of .87, a concurrent validity of .78 to .84, and a correlation of about .73 with the diagnostic judgments of a clinician.

Obtaining a Copy An example can be found in the developers' original published article [1]. However, the scale is under copyright.

Direct correspondence and reprint requests to:
Caroline Anfray
Information Resources Centre, MAPI Research Institute
27 rue de la Villette
69003 Lyon, France
Phone: +33(0) 472 13 66 67
FAX: +33 (0) 472 13 66 82
Email: canfray@mapi.fr or instdoc@mapi.fr

Scoring Each of the ten questions requires respondents to rate their experiences with RLS on a scale from 0 to 4, with 4 representing the most severe and frequent symptoms and 0 representing the least. Total scores can range from 0 to 40. As a brief scale with excellent psychometric qualities, the instrument may be suitable for a variety of research and clinical purposes, including screening and assessment of treatment outcomes.

International Restless Legs Syndrome Study Group Rating Scale (IRLS)
(Investigator Version 2.2)

Have the patient rate his/her symptoms for the following ten questions. The patient and not the examiner should make the ratings, but the examiner should be available to clarify any misunderstandings the patient may have about the questions. The examiner should mark the patient's answers on the form.

In the past week…

(1) <u>Overall</u>, how would you rate the <u>RLS discomfort in your legs or arms</u>?

- 4 ☐   Very severe
- 3 ☐   Severe
- 2 ☐   Moderate
- 1 ☐   Mild
- 0 ☐   None

In the past week…

(2) <u>Overall</u>, how would you rate the <u>need to move</u> around because of your RLS symptoms?

- 4 ☐   Very severe
- 3 ☐   Severe
- 2 ☐   Moderate
- 1 ☐   Mild
- 0 ☐   None

In the past week…

(3) <u>Overall</u>, how much <u>relief</u> of your RLS arm or leg discomfort did you get from moving around?

- 4 ☐   No relief
- 3 ☐   Mild relief
- 2 ☐   Moderate relief
- 1 ☐   Either complete or almost complete relief
- 0 ☐   No RLS symptoms to be relieved

In the past week...

(4) How severe was your <u>sleep disturbance</u> due to your RLS symptoms?

    ⁴☐ Very severe

    ³☐ Severe

    ²☐ Moderate

    ¹☐ Mild

    ⁰☐ None

In the past week...

(5) How severe was your <u>tiredness</u> or <u>sleepiness</u> <u>during the day</u> due to your RLS symptoms?

    ⁴☐ Very severe

    ³☐ Severe

    ²☐ Moderate

    ¹☐ Mild

    ⁰☐ None

In the past week...

(6) How severe was your RLS as a whole?

    ⁴☐ Very severe

    ³☐ Severe

    ²☐ Moderate

    ¹☐ Mild

    ⁰☐ None

In the past week...

(7) How <u>often</u> did you get RLS symptoms?

    ⁴☐ Very often (This means 6 to 7 days a week)

    ³☐ Often (This means 4 to 5 days a week)

    ²☐ Sometimes (This means 2 to 3 days a week)

    ¹☐ Occasionally (This means 1 day a week)

    ⁰☐ Never

In the past week…

(8) When you had RLS symptoms, how severe were they on average?

^{4}☐   Very severe (This means 8 hours or more per 24 hour day)

^{3}☐   Severe (This means 3 to 8 hours per 24 hour day)

^{2}☐   Moderate (This means 1 to 3 hours per 24 hour day)

^{1}☐   Mild (This means less than 1 hour per 24 hour day)

^{0}☐   None

In the past week…

(9) <u>Overall</u>, how severe was the impact of your RLS symptoms on your ability to carry out your <u>daily affairs</u>, for example carrying out a satisfactory family, home, social, school or work life?

^{4}☐   Very severe

^{3}☐   Severe

^{2}☐   Moderate

^{1}☐   Mild

^{0}☐   None

In the past week…

(10) How severe was your <u>mood disturbance</u> due to your RLS symptoms - for example angry, depressed, sad, anxious or irritable?

^{4}☐   Very severe

^{3}☐   Severe

^{2}☐   Moderate

^{1}☐   Mild

^{0}☐   None

The sum of the item scores serves as the global score for the scale.
Higher scores indicate more impairment /higher severity

International Restless Legs Syndrome Study Group Rating Scale (IRLS)

MAPI RESEARCH
TRUST
Education
Information
Dissemination

SCALING AND SCORING OF THE

'International Restless Legs Syndrome Study Group Rating Scale' (IRLS)

Mapi Research Trust
27 rue de la Villette
69003 Lyon
France
Phone: +33 (0) 4 72 13 65 75
Fax: +33 (0) 4 72 13 66 82

Contact:
Marie-Pierre Emery
E-mail : mpemery@mapigroup.com

The International Restless Legs Syndrome
Study Group (IRLSSG)

Represented by
Dr Arthur Walters
E-mail: ArtUMDNJ@aol.com

Dr Richard Allen
E-mail: RichardJHU@aol.com

International Restless Legs Syndrome Study Group Rating Scale (IRLS)

MAPI RESEARCH
TRUST
Education
Information
Dissemination

The IRLS is composed of 10 items.
It gives a global score for all 10 items that is most commonly used as an overall severity score.
9 of the 10 items investigate two dimensions of the RLS severity.

DESCRIPTION OF THE QUESTIONNAIRE:

Dimensions	Number of Items	Cluster of Items	Item Reversion	Direction of Dimensions
Symptoms	6	1, 2, 4, 6, 7 and 8	No	Higher score = Higher severity
Symptoms impact	3	5, 9 and 10	No	Higher score = Higher impact

Item 3 is part of the diagnostic criteria and does not belong to any of the two dimensions. It is used for the total score for overall RLS severity.

SCORING OF DIMENSIONS:

Item scaling	5-point Likert scale from 0 "None" to 4 "very severe"
Weighting of Items	No
Extension of the Scoring Scale	Symptom severity subscale: 0-24 Impact on daily living subscale: 0-12 Global score: 0-40
Scoring Procedure	The score of each subscale is calculated by summing the scores of all items of the subscale The global score is obtained by summing all the 10 items scores
Interpretation and Analysis of missing data[*]	All 10 items should be completed to calculate the global score For the symptoms subscale, all six items should be completed to calculate the subscale score For the symptoms impact subscale, all three items should be completed to calculate the subscale score
Interpretation and Analysis of 'non-concerned' answers	Not applicable for this questionnaire. Subjects should not be administered the scale unless they meet the 4 IRLSSG criteria for Restless Legs Syndrome

[*] This scale should be read to the patient by a trained staff member with the patient looking at the questions and providing a verbal answer. The staff member and not the patient records the patient's answer. In this situation there should be no missing items. If missing items occur the staff member failed to properly administer the scale and the results should probably not be accepted. Pro-rating for missing answers should not be needed for this scale.

International Restless Legs Syndrome Study Group Rating Scale (IRLS)

MAPI RESEARCH
TRUST
Education
Information
Dissemination

REFERENCE(S):

The International Restless Legs Syndrome Study Group. Validation of the International Restless Legs Syndrome Study Group rating scale for restless legs syndrome. Sleep medicine. 2003;4:121-132

Allen RP, Kushida CA, Atkinson MJ and RLS QoL Consortium. Factor analysis of the International Restless Legs Syndrome Study Group's scale for restless legs severity. Sleep Medicine. 2003; 4:133-135

Abetz L, Arbuckle R, Allen RP, Garcia-Borreguero D, Hening W, Walters AS, Mavraki E, Kirsch JM. The reliability, validity and responsiveness of the International Restless Legs Syndrome Study Group rating scale and subscales in a clinical-trial setting. Sleep Med. 2006 Jun;7(4):340-9. Epub 2006 May 19

Reference

1. Walters, A. S., LeBrocq, C., Dhar, A., Hening, W., Rosen, R., Allen, R. P., Trenkwalder, C., & International Restless Legs Syndrome Study Group. (2003). Validation of the International Restless Legs Syndrome Study Group rating scale for restless legs syndrome. *Sleep Medicine, 4*(2), 121–132.

Representative Studies Using Scale

Bjorvatn, B., Leissner, L., Ulfberg, J., Gyring, J., Karlsborg, M., Regeur, L., Skeidsvoll, H., Nordhus, I. H., & Pallesen, S. (2005). Prevalence, severity and risk factors of restless legs syndrome in the general adult population in two Scandinavian countries. *Sleep Medicine, 6*(4), 307–312.

Hornyak, M., Hundemer, H., Quail, D., Riemann, D., Voderholzer, U., Trenkwalder, C. (2007). Relationship of periodic leg movements and severity of restless legs syndrome: A study in unmedicated and medicated patients. *Clinical Neurophysiology, 118*(7), 1532–1537.